ATTACHMENT J3

Hanscom AFB Water Distribution System

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J3.1 Hanscom AFB Overview

Hanscom AFB is located 20 miles northwest of Boston and is surrounded by the historic towns of Bedford, Lexington, Lincoln, and Concord. The Base occupies approximately 830 acres of land, and has approximately 200 buildings and other facilities with a total square footage of approximately 5.5 million square feet.

More than 13,000 people live and work at Hanscom AFB. Many are employees of the following major on-Base tenants:

- The Electronics Systems Center (ESC) plans and manages the acquisition of electronic command, control, communications, and intelligence systems for the Air Force, other military services, and various DoD and other entities. The ESC has an annual budget of $4 billion and manages more than 200 programs ranging from secure communication systems to mission planning systems. The Airborne Warning and Control System (AWACS) and the Joint Surveillance Target Attack Radar System (JSTARS) are two of the ESC's premiere programs.
- The MITRE Corporation is a federal contract research center that provides assistance to the ESC on systems engineering, architectures and interoperability, technology application, system development, and acquisition and process implementation.
- The Massachusetts Institute of Technology (MIT) Lincoln Laboratory is a federally funded research center with areas of responsibility that include radar, communications, digital signal processing, optic research, and advanced electronics.
- The Air Force Research Laboratory, a consolidation of the former Phillips and Rome Laboratories, houses the Air Force Center for Research in the Environmental Sciences, and for Scientific Research and Development of Command, Control, Communication, and Intelligence Technology. It operates several laboratories and technical facilities including vacuum testing chambers. It also operates a research library that also serves the ESC, MITRE, the Base community, and area businesses and academic institutions.
- The 66th Air Base Wing provides municipal services to the Base community.

Hanscom AFB dates from 1941, when the Massachusetts legislature authorized the purchase of a large tract of farmland for an auxiliary Boston airport to be funded by the federal government in anticipation of the future war effort. In 1942 the Bedford Airport was leased to the War Department and used as a training site. The airport was renamed Laurence G. Hanscom Field in 1943. Through the years, the airfield—renamed Laurence G. Hanscom AFB in 1973, and shortened to Hanscom AFB in 1977—became an important radar research and testing center. All flight operations, except for transient aircraft servicing, ceased in 1973; the Air Force terminated its lease on the airfield portion of the Base, but retained the right to use the airfield.

Projected future mission requirements have necessitated the renovation or demolition of older facilities at Hanscom AFB and the construction of new facilities. The Hanscom AFB Capital Improvements Program (CIP) emphasizes consolidating existing facilities and maximizing their utilization as much as possible. Over the next 5 years, key projects planned for Hanscom AFB, if implemented, will increase the total square footage of buildings and facilities on Base by approximately 5 percent**.**

J3.2 Water Distribution System Description

J3.2.1 Water Distribution System Fixed Equipment Inventory

The Hanscom AFB water distribution system consists of all appurtenances physically connected to the distribution system from the point in which the distribution system enters the Installation and Government ownership currently starts at the point of demarcation, defined by the Right of Way. The system includes, but is not limited to, pipeline main and service lines, valves, fire hydrants, storage reservoir and control building, pressure reducing valve stations, exterior backflow devices, and meters. The actual inventory of items sold will be in the bill of sale at the time the system is transferred. The following description and inventory is included to provide the Contractor with a general understanding of the size and configuration of the distribution system. The Government makes no representation that the inventory is accurate. The Contractor shall base its proposal on site inspections, information in the technical library, other pertinent information, and to a lesser degree the following description and inventory. Under no circumstances shall the Contractor be entitled to any service charge adjustments based on the accuracy of the following description and inventory.

Specifically excluded from the water distribution system privatization are:

- Approximately 6,800 linear feet of cast iron piping owned by the U.S. Navy.
- Hanscom AFB Military Family Housing water distribution.

J3.2.1.1 Description

The Town of Lexington provides 95 percent of the potable water supply to Hanscom AFB through three metered connections:

- Hartwell Avenue connection – located where the Hanscom AFB 8-inch main connects to the Town of Lexington main at the Town of Lexington (HAFB)-owned meter on Hartwell Avenue.
- Wright Street connection – located where the Hanscom AFB 10-inch main, located within a 50-foot wide easement through an off-Base housing development, connects to the Town of Lexington (HAFB)-owned meter near Katahdin Hill on Wright Street.
- Wood Street Emergency connection – this connection is made through a normally closed 8-inch main on Wood Street which connects to the Town of Lexington (HAFB) owned meter connection, which is approximately 100 feet southeast of its intersection with Hartwell Avenue.

The remaining 5 percent of potable water supplied to the Base serves the trailer park and Family Camp area located north of Massport's L.G. Hanscom Airport. The trailer park is served by the Town of Bedford through a meter owned by the Air Force; the Family Camp area is served by the Town of Lexington through an Air Force-owned meter.

Hanscom AFB, as well as both towns, receive their water from the Massachusetts Water Resources Authority (MWRA). The Town of Lexington and the Town of Bedford provide water at separate locations on the installation which are not connected and are separately metered. Hanscom AFB holds a 1996 Certificate of Registration (PWS ID# 3023002) from the Massachusetts Department of Environmental Protection (DEP) Division of Water Supply as a registered public water supplier in Massachusetts. The Towns of Lexington and Bedford, which supply the water, provide water quality monitoring. MWRA provides disinfection. The Base has discontinued the use of its hypochlorite injection disinfection systems this is because of the stability of the disinfection approach where the water system generally contains approximately 2 milligrams per liter (mg/L) of available chlorine. Hanscom AFB currently provides no additional disinfection for the water system.

The potable water distribution system is a looped system which includes a 1 million gallon ground-level steel storage reservoir which provides onsite water storage capacity. The reservoir high-level shutoff is controlled by an 8-inch altitude valve located in an 80 square foot concrete masonry unit (cmu) control building. The steel reservoir has an impressed current cathodic projection system. The water supply pressure from the City is too high for standard municipal service and, therefore, is reduced for use on the Base at two pressure reducing valve stations which then provide adequate water pressure on Base. As noted above, the Base can supplement the disinfection provided by the Town of Lexington to the main Base, if necessary, with three onsite chlorination systems, but discontinued their use in January 2001.

The average depth of the buried pipe at Hanscom AFB is approximately six to eight feet.

The military family housing areas are not a part of the system to be privatized. Military family housing connects to the Hanscom AFB installation main at six locations:

- Military Family Housing POD #1 is at the downstream connection to main water valve (MWV) 46A, this is the connection of the Military Family Housing 8" main with the Hanscom AFB main. This is located at the center of Vandenburg drive, near BLDG 1630.
- Military Family Housing POD #2 is at the connection to MWV 133, this is the connection of the 10" Hanscom AFB main from Marrett Road with the Military Family Housing main on Offut Road. This is located between BLDG 2021 and BLDG 2020, approximately 690 lf south easterly along Offut Road form the intersection of Patterson Road and Offut Road. Ownership does not include the valve.
- Military Family Housing POD #3 is where the service lateral for BLDG 2001 leaves the Hanscom AFB main. This is located on Ent Road approximately 150 lf north east of the intersection of Ent Road with Patterson Road.
- Military Family Housing POD #4 is at MWV 93B, located at the south east corner of the intersection of Patterson Road and Ent Road. Ownership does not include the valve.

- Military Family Housing POD #5 is at MWV 93A, located on Ent Road near the intersection with Patterson Road. Ownership does not include the valve.
- Military Family Housing POD#6 is at MWV 8-12, located near the intersection of Adams Road and Colonial Place. This POD is located to the south of Building 1994. Ownership includes the valve.

J3.2.1.2 Inventory

Table 1 provides a general listing of the major water distribution system fixed assets for the Hanscom AFB water distribution system included in the sale.

TABLE 1
Fixed Inventory
Water Distribution System, Hanscom AFB

Item	Size	Quantity	Unit	Approximate Year of Construction
	Main Base			
Piping				
Ductile iron pipe	4-in.	1,330	LF	1955
	6-in.	950	LF	2000
	8-in.	900	LF	1995
	8-in.	5,350	LF	2000
	10-in.	2,000	LF	1995
	10-in.	320	LF	2000
	12-in.	925	LF	1955
Cast iron pipe	2-in.	550	LF	1955
	6-in.	7,170	LF	1955
	8-in.	36,470	LF	1955
	10-in.	1420	LF	1955
	12-in.	6,960	LF	1955
	16-in.	1,260	LF	1955
Asbestos concrete pipe	4-in.	270	LF	1955
	6-in.	550	LF	1955
	8-in.	5,680	LF	1955
Copper pipe	1 ¼-in.	2,240	LF	1955
	1 ¼-in.	350	LF	2000
	1 ½-in.	2,940	LF	1955
	2-in.	2,450	LF	1955
	2-in.	200	LF	2000
Valves (est. based on the length of pipe)	2-in.	13	EA	1955
	2-in.	1	EA	2000

TABLE 1
Fixed Inventory
Water Distribution System, Hanscom AFB

Item	Size	Quantity	Unit	Approximate Year of Construction
	4-in.	8	EA	1955
	6-in.	33	EA	1955
	6-in.	3	EA	2000
	8-in.	181	EA	1955
	8-in.	7	EA	1995
	8-in.	18	EA	2000
	10-in.	6	EA	1955
	10-in.	14	EA	1995
	10-in.	1	EA	2000
	12-in.	34	EA	1955
	16-in.	6	EA	1955
Altitude Valve (size estimated)	16-in.	1	EA	1955
Pressure Reducing Valves	3-in.	2	EA	1955
	8-in.	2	EA	1955
Fire hydrants (4.5-in. valve size)		158	EA	1955
Aboveground Steel Storage Reservoir	1.0 MG	1	EA	1954
Reservoir Control Building	9 ft x 9 ft	1	EA	1954
Reservoir cathodic protection system, Goodale, Model CTAYSA 50-8	115 VAC/5.2 amp	1	EA	1985
Pressure reducing station vault	16’ x 9’ x 8’ 4” precast buried vaults with manhole entry	1	EA	2002
Pressure reducing station vault	10’ x 6’ x 8” precast buried vaults with manhole entry	1	EA	2002
Steel Reservoir Obstruction Lighting		1	LS	1985
Hypochlorite disinfection systems		3	EA	1990
Water Meters				
	3-in. turbine	8	EA	1985
	2-in. compound	12	EA	1985
	1½ -in. compound	8	EA	1985
	1-in. nut. Disk	3	EA	1985
	Family Campground			

TABLE 1
Fixed Inventory
Water Distribution System, Hanscom AFB

Item	Size	Quantity	Unit	Approximate Year of Construction
Piping				
PVC pipe	1-in.	130	LF	2000
	2-in.	1,000	LF	2000
	4-in.	1,705	LF	2000
	6-in.	275	LF	2000
Copper pipe	½ -in.	1,005	LF	1955
	¾ -in.	130	LF	1955
Valves				
Valve	2-in.	4	EA	2000
	4-in.	8	EA	2000
	6-in.	1	EA	2000
Water Meter (size estimated)	3-in. turbine	1	EA	1985
	Mobile Home Park			
Piping				
PVC pipe	2-in.	50	LF	1965
	6-in.	1,530	LF	1965
Copper pipe	¾ -in.	7,900	LF	1965
	1¼ -in.	180	LF	1965
	1½ -in.	470	LF	1965
Ductile iron pipe	6-in.	2,570	LF	1965
Valves				
	2-in.	1	EA	1965
	6-in.	20	EA	1965
Water Meter (size estimated)	3-in. turbine	1	EA	1985

Ea = each
ft = feet
gal. = gallon
in. = inch
lf = linear feet
PVC = polyvinyl chloride

J3.2.2 Water Distribution System Non-Fixed Equipment and Specialized Tools

Table 2 lists other ancillary equipment (spare parts) and **Table 3** lists specialized vehicles and tools included in the purchase. Offerors shall field verify all equipment, vehicles, and

tools prior to submitting a bid. Offerors shall make their own determination of the adequacy of all equipment, vehicles, and tools.

TABLE 2
Spare Parts
Water System Hanscom AFB

Qty	Item	Description	Make/Model	Remarks
No spare parts are included with the system to be privatized.				

TABLE 3
Specialized Vehicles and Tools
Water Distribution System Hanscom AFB

Qty	Description	Location	Maker
1	Portable 2-in. back flow hydrant protector	Bldg 1833	Watts 909 Serial No 249 141, 2-in.

J3.2.3 Water Distribution System Manuals, Drawings, and Records

Table 4 lists the manuals, drawings, and records that will be transferred with the system.

TABLE 4
Manuals, Drawings, and Records
Water Distribution System Hanscom AFB

Qty	Item	Description	Remarks
1	Base Comprehensive Plan	"Composite Utilities – Water System" (G Tab)	Hard copy and CD
1	Water shutoff locations	Three-ring binder	Building 1883
4	Manuals	Miscellaneous equipment	Building 1883
1	Manual	Massachusetts Water Department Manual for Testing and Survey	Building 1883
1	Operation manual	Tinker Loop Pressure Reducing Valve Station	Building 1883
1	Operation manual	Gate 4 Pressure Reducing Valve Station	Building 1883

J3.3 Specific Service Requirements

The service requirements for the Hanscom AFB water distribution system are as defined in the Section C, *Description/Specifications/Work Statement*. The following requirements are specific to the Hanscom AFB water distribution system and are in addition to those found in Section C. If there is a conflict between requirements described below and Section C, the requirements listed below take precedence over those found in Section C.

- The Contractor shall enter into a Memorandum of Understanding with the Hanscom AFB Fire Department for fire protection and detection system of all facilities included in the purchase of the utility. The MOU shall be completed during the transition period and a copy provided to the Contracting officer.
- The Contractor shall abide by Hanscom AFB fire protection and detection system requirements. The utility system purchased by the Contractor may include facilities. These facilities may or may not include fire protection and detection systems. Where required by federal, state or local regulations, the Contractor shall maintain the fire protection and detection system for all facilities owned and operated by the Contractor. The Contractor shall permit Fire Department personnel access to their facilities to perform fire inspections and emergency response.
- The Contractor shall coordinate any change to the water distribution system that may affect fire protection with the Base Fire Department.
- The Contractor shall operate, maintain, and test the Base water system IAW applicable federal, state, and local rules and regulations for potable water systems. The Contractor shall provide the Contracting Officer with a copy of any and all testing information and reports related to the water distribution system that are submitted to any agency.
- The Contractor shall own and maintain all obstruction lighting on the water reservoir.
- The Contractor shall maintain and operate the cathodic protection system for the water reservoir.
- The Contractor shall maintain Air Force marking on water tanks and shall coordinate with the Base Civil Engineer before changing the water reservoir exterior coating color scheme.
- The Contractor shall not rent space on the reservoir for advertising or for installing any equipment, antennas, or communication-associated devices.

J3.4 Current Service Arrangement

Hanscom AFB currently obtains 95 percent of its potable water from the Town of Lexington, with the remainder being supplied by the Town of Bedford.

Water consumption at Hanscom AFB was approximately 191 million gallons in 1998 and ranged from a low of 12.7 million gallons in November 1997 (0.42 million gallons per day [gpd]) to a peak of 20.4 million gallons in August 1998 (0.66 million gpd). The portion of water supplied to the Family Camp area and the Trailer Park areas by the Town of Bedford

was approximately 7 million gallons in 1998 (0.019 million gpd). The capacity of the potable water distribution system is limited by the amount of water that can be obtained from the Town of Lexington. The agreement limits water supply to 2 million gpd or 730 million gallons per year. Available water supply is approximately three times the current consumption.

The water utility systems at Hanscom AFB and its offsite facilities are currently classified by the Massachusetts DEP as "owner-owned" distribution systems. The DEP has indicated that the private owner of a water utility system would be required to notify the DEP of the change in ownership, may be required to obtain approval of the transfer of ownership, and may be required to amend an existing permit to include the distribution system or obtain a permit for the system, depending on the specifics of the sale. DEP also indicated that the regulatory approval process for transfer of ownership of a water utility system takes approximately 1 month.

J3.5 Secondary Metering

J3.5.1 Existing Secondary Meters

Table 5 provides a listing of the existing (at the time of contract award) secondary meters that will be transferred to the Contractor. The Contractor shall provide meter readings for all secondary meters IAW Paragraph C.3 and J3.6 below.

TABLE 5
Existing Secondary Meters
Water Distribution System Hanscom AFB

Meter Description	Quantity		Approximate year of installation
3-in. turbine	8	ea	1985
2-in. compound	12	ea	1985
1½ -in. compound	8	ea	1985
1-in. nut. Disk	3	ea	1985
2-in turbine	1	ea	2003

J3.5.2 Required New Secondary Meters

The Contractor shall install and calibrate new secondary meters as listed in **Table 6**. New secondary meters shall be installed IAW Paragraph C.13, Transition Plan. After installation, the Contractor shall maintain and read these meters IAW Paragraphs C.3 and J3.6 below.

TABLE 6
New Secondary Meters
Water Distribution System Hanscom AFB

Meter Location	Meter Description

TABLE 6
New Secondary Meters
Water Distribution System Hanscom AFB

Meter Location	Meter Description
New Base Exchange and Commissary Complex	
Lincoln School (1)	
Lincoln School (2)	
Lincoln School (3)	
Lincoln School (4)	
Complex of buildings (1429, 1435, 1436, 1444)	
Clubs and Hotels Complex	
Civil Engineering Complex	
Air Force Research Lab complex A (old Philips Lab)	
Air Force Research Lab complex B (old Rome Lab)	
Buildings 1549 and 1550 (Pool and Bath-house)	
Building 1603	
Building 1609	
Building 1993	
Building 1999	
Military Housing POD #1	
Military Housing POD #2	
Military Housing POD #3	
Military Housing POD #4	
Military Housing POD #5	

J3.6 Monthly Submittals

The Contractor shall provide the Government monthly submittals for the following:

1. Invoice (IAW G.2). The Contractor's monthly invoice shall be presented in a format proposed by the Contractor and accepted by the Contracting Officer. Invoices shall be submitted by the 25th of each month for the previous month. Invoices shall be submitted to:

   Name: 66MSG/CEK
   Address: 120 Grenier Street
   Hanscom AFB, MA 01731-1910

2. Outage Report. The Contractor's monthly outage report will be prepared in the format proposed by the Contractor and accepted by the Contracting Officer. Outage reports shall be submitted by the 25th of each month for the previous month. Outage reports shall be submitted to:

   Name: 66MSG/CEK
   Address: 120 Grenier Street
   Hanscom AFB, MA 01731-1910

3. Meter Reading Report. The monthly meter reading report shall show the current and previous month readings for all identified secondary meters. The Contractor's monthly meter reading report will be prepared in the format proposed by the Contractor and accepted by the Contracting Officer. Meter reading reports shall be submitted by the 15th of each month for the previous month. Meter reading reports shall be submitted to:

   Name: 66MSG/CEK
   Address: 120 Grenier Street
   Hanscom AFB, MA 01731-1910

J3.7 Water Conservation Projects

IAW Paragraph C.3, Utility Service Requirement, the following projects have been implemented by the Government for conservation purposes.

- There are no water conservation projects associated with the system to be privatized.

J3.8 Service Area

IAW Paragraph C.4, Service Area, the service area is defined as all areas within the Hanscom AFB boundaries.

J3.9 Off-Installation Sites

No off-installation sites are included in the sale of the Hanscom AFB water distribution system.

J3.10 Specific Transition Requirements

IAW Paragraph C.13, Transition Plan, **Table 7** provides a listing of service connections and disconnections required upon transfer.

TABLE 7
Service Connections and Disconnections
Water Distribution System Hanscom AFB

Location	Description
There are no specific transition requirements for the system to be privatized.	

J3.11 Government Recognized System Deficiencies

Table 8 provides a listing of system improvements that the Government has planned. The Government recognizes these improvement projects as representing current deficiencies associated with the Hanscom AFB water distribution system. If the utility system is sold, the Government will not accomplish these planned improvements. The Contractor shall make a determination as to its actual need to accomplish and the timing of any and all such planned improvements. Capital upgrade projects shall be proposed through the Capital Upgrades and Renewal and Replacement Plan process and will be recovered through Schedule L-3. Renewal and Replacement projects will be recovered through Sub-CLIN AC.

TABLE 8
System Improvement Projects
Water Distribution System Hanscom AFB

Project Location	Project Description
Offut Street	2003—Repair water system
Capehart	2004—Repair water lines
Capehart	2005—Repair water lines
Scott Road Loop	2004—Construct new 12-inch Ductile Iron water line